

## **T-115-R-1**

### **Effectiveness of Illinois' Protected Lands Network at Supporting SGCN and their Habitats.**

For Submission To:

Illinois Department of Natural Resources  
State Wildlife Grant  
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Submitted by:

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**Make Award To: The Board of Trustees of the University of Illinois**  
c/o Office of Sponsored Programs  
1901 S. First Street, Suite A  
Champaign, IL 61820

Amount Requested: \$ 350,000  
Project Period: 1 November 2016 – 31 August 2019

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Peter Schiffer  
Vice Chancellor for Research  
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## Executive Summary

**Title:** Effectiveness of Illinois' Protected Lands Network at Supporting SGCN and their Habitats.

**Project Number:** T-115-R-1

**Applicant information:** Board of Trustees of the University of Illinois

### Objectives:

- I. Conduct conservation status reviews for Natural Community Types
- II. Evaluate inclusiveness and gaps for Natural Community Types within Illinois' Protected Lands Network
- III. Develop and Conduct a threats assessment for Protected Lands in Illinois
- IV. Conduct conservation status reviews for SGCN
- V. Identify protected habitats for SGCN and gaps in protection
- VI. Identify key locations for biodiversity protection and stewardship
- VII. Complete reporting requirements.

**Proposed Grant Period:** 1 November 2016 – 31 August 2019.

**Amount Requested:** \$ 350,000

**State(s) and Partners Involved:** IL Dept. Nat. Resources/ IL Natural History Survey

**Key Habitats Addressed:** Forest, Prairie, Wetland, Streams.

### Summary Statement:

This project will conduct conservation status reviews of Natural Community Types and SGCN within Illinois that will assist with prioritizing protection and stewardship activities aimed at maintaining high quality natural communities and viable populations of native species. We will identify key locations and gaps in biodiversity protection within Illinois' Protected Lands Network for focusing conservation actions on high quality Natural Communities based on their current state-wide distributions and the contribution of the site in meeting regional conservation goals.

### Estimated Cost:

	<b>Total Federal</b>	<b>INHS Match</b>	<b>Total Cost</b>
<b>Year One Funding</b>	\$115,000	\$20,946	\$135,946
<b>Year Two Funding</b>	\$115,000	\$20,946	\$135,946
<b>Year Three Funding</b>	\$120,000	\$23,641	\$143,641
<b>Total Funding</b>	<b>\$350,000</b>	<b>\$65,533</b>	<b>\$415,533</b>

**Project Title:** Effectiveness of Illinois' Protected Lands Network at Supporting SGCN and their Habitats.

**Project Number:** T-115-R-1

**Need:**

Protected lands are the foundation for conservation planning in Illinois where Nature Preserves are designated to maintain the highest quality examples of Natural Community Types and to provide habitat for rare species into the future. Nature Preserve designation offers the highest level of protection for lands within Illinois as authorized in the Illinois Natural Areas Preservation Act (525 ILCS 30). However, no formal statewide evaluation of the effectiveness of Nature Preserves on meeting the natural community and biodiversity goals associated with the State Wildlife Action Plan has been conducted.

Protected lands are increasingly isolated by highly modified landscapes and require ongoing stewardship to maintain conditions that meet site based conservation goals (Szafoni 2012, INPC 2015). Constraints on personnel and financial resources necessitate prioritization of this work to a limited number of locations each year. Efficiently allocating these resources is therefore critical for effective delivery of conservation actions under these constraints.

This projects aims to identify key locations for the protection of high quality Natural Community Types and Species in Greatest Conservation Need to more effectively and efficiently prioritize and undertake conservation stewardship and protection activities to meet statewide and regional conservation goals.

**Objectives:**

The primary objective of this project is to evaluate the effectiveness of the Protected Lands Network at including Illinois' highest quality Natural Community Types and Species in Greatest Conservation Need. These efforts will concurrently identify gaps in the Protected Lands Network that may limit meeting statewide and regional conservation goals. We will address the following major questions in this project:

(Q1) How effectively does the current Protected Lands Network include the highest quality and most resilient examples of Illinois' Natural Community Types? (See Objective II and Objective III for details.)

(Q2) How effectively does the current Protected Lands Network provide critical habitat for Illinois' SGCN? (See Objective V and VI for details.)

**Objective I:** Conduct Conservation status reviews for Natural Community Types in Illinois using a standard method during the first year of the project. (Details are described in Job 1 and the Project Schedule.)

**Objective II:** Evaluation of inclusiveness for Natural Community Types contained within the Protected Lands Network and gaps in coverage during the first year of the project. (Details are described in Job 2 and the Project Schedule.)

**Objective III:** Develop a Threats Assessment for protected lands and watersheds to identify key locations for Stewardship and Protection of Natural Community Types within each Natural Division (Project Year 2) and for Biologically Significant Stream Reaches (BSS; Bol et al. 2007, State of Illinois 2008) within Ecological Drainage Units (EDU; Hinz et al. 2013; Project Year 3). (Details are described in Jobs 3-5 and the Project Schedule.)

**Objective IV:** Conduct conservation status reviews for Illinois' Species in Greatest Conservation Need using a standard method during the first two years of the project. (Details are described in Job 6 and the Project Schedule.)

**Objective V:** Identify protected habitats containing SGCN (E&T) and gaps in coverage during the second year of the project. (Details are described in Job 7 and the Project Schedule.)

**Objective VI:** Identify key locations for biodiversity protection and stewardship based on SGCN during the third year of the project. (Details are described in Job 8-9 and the Project Schedule.)

**Objective VII:** Complete reporting requirements by writing reports and manuscripts. Annual reports and a final report will be provided at the time specified in the grant agreement. (Details are described in Job 10 and the Project Schedule.)

### **Approach:**

This study will be completed by staff of the Illinois Natural History Survey in cooperation with the Division of Natural Heritage of the Illinois Department of Natural Resources' Office of Resource Conservation located in Springfield.

### **Jobs:**

**Objective I: Conduct a conservation status review for Natural Community Types.**

*Job 1.* We will use existing data within the Illinois Natural Heritage Database and other information to develop subnational conservation ranks (S ranks) for

Natural Community Types in Illinois by applying the methods developed by NatureServe (Faber-Langendoen et al. 2012). This work will be conducted during the first four quarters of the project period.

**Objective II: Evaluate the inclusiveness of Natural Community Types within the Protected Lands Network and gaps in coverage.**

*Job 2.* We will use existing data (e.g., Natural Heritage Database, Protected Lands Database) to identify the extent (i.e., the distribution and number of sites) to which each Natural Community Type is represented on Protected Lands. This work will be conducted during the first four quarters of the project.

**Objective III: Identify key sites and stream reaches for Stewardship and Protection.**

*Job 3.* We will develop and apply a vulnerability index for lands & watersheds in Illinois that uses landscape scale data summaries associated with known and projected threats (e.g., landuse, NPDES permit locations) to estimate expected vulnerability to disturbance for Illinois Nature Preserves and Biologically Significant Stream reaches. Work evaluating Nature Preserves will be conducted during the second year of the project and work on BSS reaches will be conducted during the third year of the project.

*Job 4.* We will rank the vulnerability of sites with protected status for each Natural Community Type within each Natural Division and for BSS stream reaches within each EDU (Hinz et al. 2013). Work evaluating Natural Community Types will be conducted during the second year of the project and work on BSS reaches will be conducted during the third year of the project.

*Job 5.* We will identify key locations using a rarity-weighted richness modeling approach applied to Natural Community Types following the method outlined in Stein et al. (2000) and applied by NatureServe for critically imperiled and imperiled (G1 or G2) species in the United States ([Example Map](#)). This work will be conducted during the second year of the project using the subnational ranks (S ranks) developed in Job 1.

**Objective IV: Conservation status review for Illinois SGCN.**

*Job 6.* We will use existing data within the Illinois Natural Heritage Database and additional information to develop subnational conservation ranks (S ranks) for currently listed non-plant Endangered and Threatened species (E&T) in Illinois using methods developed by NatureServe (Faber-Langendoen et al. 2012). When sufficient data are available conservation ranks for additional SGCN will also be developed. This work will begin during the

project's third quarter and be completed by the end of the second year of the project.

**Objective V: Identify protected habitats for SGCN.**

*Job 7.* We will use existing data (e.g., Natural Heritage Database, Protected Lands Database) to identify the distribution and number of protected sites containing occupied habitat for Illinois' non-plant E&T species and gaps in their protection. This work will be conducted during the second year of the project period.

**Objective VI: Identify key locations for biodiversity protection based on E&T.**

*Job 8.* We will identify key protected lands (e.g., Nature Preserves) using a rarity-weighted richness modeling approach applied to Illinois non-plant Endangered and Threatened Species following the approach outlined in Stein et al (2000) and applied by NatureServe for critically imperiled and imperiled (G1 or G2) species in the United States ([Example Map](#)). This work will be conducted during the third year of the project period using the subnational conservation ranks developed in Job 6.

*Job 9.* We will identify key Biologically Significant Stream segments using a rarity-weighted richness modeling approach applied to species of fish and mussels following the approach outlined in Stein et al (2000) and applied by NatureServe for critically imperiled and imperiled (G1 or G2) species in the United States ([Example Map](#)). This work will be conducted during the third year of the project period using the subnational conservation ranks developed in Job 6.

**Objective VII. Complete Reporting requirements.**

*Job 10.* We will complete annual progress reports and a final report that includes updated conservation status ranks (S Ranks) for Natural Community Types and non-plant SGCN (Illinois E&T), a vulnerability rating for protected lands and BSS reaches in Illinois, and maps of key locations for biodiversity protection.

## **Anticipated Outcomes and Benefits:**

Expected outputs, outcomes and benefits associated with this project include:

### *Outputs:*

1. Updated State Conservation Status Ranks (S Ranks) for Illinois' Natural Community Types and SGCN that provide a common assessment standard for prioritization of conservation actions.
2. Threats assessment that identifies principle threats for protected lands that will assist with identification and prioritization of stewardship needs.
3. Identification of Natural Community Types and T&E species that occur primarily outside of protected lands as gaps in the system of protected lands in Illinois.
4. Map of key locations for protection of high quality Natural Community Types that will assist with prioritization of stewardship needs.
5. Map of key locations for Biodiversity protection based on non-plant T&E locations that assists with prioritization of stewardship needs.

### *Outcomes and Benefits:*

1. Improved stewardship of high quality Natural Communities and SGCN that enhances their viability.
2. Improved identification of key locations for designation under protected status that enhances the effectiveness of the protected lands system for conserving key natural communities and rare species throughout the State of Illinois.

## **Literature Cited:**

- 525 ILCS 30. Illinois Natural Areas Preservation Act.  
<http://ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1739&ChapterID=44>
- Bol, L., A. M. Holtrop, L. C. Hinz Jr., and J. Epifanio. 2007. Evaluating streams in Illinois based on aquatic biodiversity. Final Report to the Illinois Department of Natural Resources. Illinois Natural History Survey Technical Report 2007(57).
- Faber-Langendoen, D., J. Nichols, L. Master, K. Snow, A. Tomaino, R. Bittman, G. Hammerson, B. Heidel, L. Ramsay, A. Teucher, and B. Young. 2012. NatureServe Conservation Status Assessments: Methodology for Assigning Ranks. NatureServe, Arlington, VA.
- Hinz Jr., L. C., B.A. Metzke, and J. Vandermyde. 2013. Hierarchical Framework for Wadeable Stream Management and Conservation. Annual Report 2013. Prepared for Illinois Department of Natural Resources, State Wildlife Grant Program. Illinois Natural History Survey Technical Report 2013/29.
- INPC 2015. Illinois Nature Preserves Commission 2015-202 Strategic Plan With Implementation Objectives. Public Review Draft 8/11/15.
- State of Illinois. 2008. Integrating multiple taxa in a biological stream rating system. Illinois Department of Natural Resources, Springfield, IL. 34pp.
- Stein, B.A., L.S. Kutner, and J.S. Adams (editors). 2000. Precious Heritage: The Status of Biodiversity in the United States. New York: Oxford University Press. 416 p.
- Szafoni, D.L. (editor). 2012. Re-evaluation of Existing Category I Illinois Natural Areas Inventory Areas As Part of the Illinois Natural Areas Inventory Update Project Final Report. INHS Technical Report 2012(36).



## Budget Year 1

PROJECT BUDGET Expense Line Item	Year 1		
	Request	Match	Total
<b>SALARIES &amp; WAGES</b>			
Professional (Cao Cost Share)	\$65,000	\$2,904	\$67,904
Professional (Anderson Cost Share)	\$0	\$17,622	\$17,622
<b>Total Salaries &amp; Wages</b>	<b>\$65,000</b>	<b>\$20,526</b>	<b>\$85,526</b>
<b>FRINGE BENEFITS</b>			
Professional @ 44.77%	\$29,101	\$1,300	\$30,401
Professional @ 44.77%	\$0	\$7,889	\$7,889
<b>Total Fringe Benefits</b>	<b>\$29,101</b>	<b>\$9,189</b>	<b>\$38,290</b>
<b>Total Salaries, Wages, &amp; Fringe Benefits</b>	<b>\$94,101</b>	<b>\$29,715</b>	<b>\$123,816</b>
<b>TRAVEL</b>			
Out of state	\$800		\$800
In state	\$200		\$200
Operation of Auto	\$0		\$0
<b>Total Travel</b>	<b>\$1,000</b>	<b>\$0</b>	<b>\$1,000</b>
<b>MATERIALS &amp; SUPPLIES - General</b>	\$132		\$132
Publication costs (reprints/page costs)			\$0
<b>Total Materials &amp; Supplies</b>	<b>\$132</b>	<b>\$0</b>	<b>\$132</b>
<b>CONTRACTUAL SERVICES - General</b>	\$250		\$250
Each Subaward up to \$25K			\$0
Exempt Subawards (>\$25K)			\$0
Conference Registration Fees	\$350		\$350
<b>Total Contractual Services</b>	<b>\$600</b>	<b>\$0</b>	<b>\$600</b>
<b>TELECOMMUNICATION SERVICES</b>			\$0
<b>EQUIPMENT</b> (each item \$5000 +)			\$0
<b>Total Direct Costs</b>	<b>\$95,833</b>	<b>\$29,715</b>	<b>\$125,548</b>
<b>Modified Total Direct Costs (MTDC)</b>	<b>\$95,833</b>	<b>\$29,715</b>	<b>\$125,548</b>
<b>F&amp;A (20 % MTDC)</b>	<b>\$19,167</b>		<b>\$19,167</b>
<b>F&amp;A (26 % MTDC)</b>		<b>\$7,726</b>	<b>\$7,726</b>
<b>Unrecovered F&amp;A (20 % vs. 26 % )</b>		<b>\$5,749</b>	<b>\$5,749</b>
<b>Total Proposed Project Budget</b>	<b>\$115,000</b>	<b>\$43,190</b>	<b>\$158,190</b>

## Budget Year 2

PROJECT BUDGET Expense Line Item	Year 2		
	Request	Match	Total
<b>SALARIES &amp; WAGES</b>			
Professional (Cao Cost Share)	\$65,000	\$2,904	\$67,904
Professional (Anderson Cost Share)	\$0		\$0
<b>Total Salaries &amp; Wages</b>	<b>\$65,000</b>	<b>\$2,904</b>	<b>\$67,904</b>
<b>FRINGE BENEFITS</b>			
Professional @ 44.77%	\$29,101	\$1,300	\$30,401
Professional @ 44.77%	\$0	\$0	\$0
<b>Total Fringe Benefits</b>	<b>\$29,101</b>	<b>\$1,300</b>	<b>\$30,401</b>
<b>Total Salaries, Wages, &amp; Fringe Benefits</b>	<b>\$94,101</b>	<b>\$4,204</b>	<b>\$98,305</b>
<b>TRAVEL</b>			
Out of state	\$800		\$800
In state	\$200		\$200
Operation of Auto	\$0		\$0
<b>Total Travel</b>	<b>\$1,000</b>	<b>\$0</b>	<b>\$1,000</b>
<b>MATERIALS &amp; SUPPLIES - General</b>	<b>\$132</b>		<b>\$132</b>
Publication costs (reprints/page costs)			\$0
<b>Total Materials &amp; Supplies</b>	<b>\$132</b>	<b>\$0</b>	<b>\$132</b>
<b>CONTRACTUAL SERVICES - General</b>	<b>\$250</b>		<b>\$250</b>
Each Subaward up to \$25K			\$0
Exempt Subawards (>\$25K)			\$0
Conference Registration Fees	\$350		\$350
<b>Total Contractual Services</b>	<b>\$600</b>	<b>\$0</b>	<b>\$600</b>
<b>TELECOMMUNICATION SERVICES</b>			\$0
<b>EQUIPMENT (each item \$5000 +)</b>			\$0
<b>Total Direct Costs</b>	<b>\$95,833</b>	<b>\$4,204</b>	<b>\$100,037</b>
<b>Modified Total Direct Costs (MTDC)</b>	<b>\$95,833</b>	<b>\$4,204</b>	<b>\$100,037</b>
<b>F&amp;A (20 % MTDC)</b>	<b>\$19,167</b>		<b>\$19,167</b>
<b>F&amp;A (26 % MTDC)</b>		<b>\$1,093</b>	<b>\$1,093</b>
<b>Unrecovered F&amp;A (20 % vs. 26 % )</b>		<b>\$5,750</b>	<b>\$5,750</b>
<b>Total Proposed Project Budget</b>	<b>\$115,000</b>	<b>\$11,047</b>	<b>\$126,047</b>

### Budget Year 3

PROJECT BUDGET Expense Line Item	Year 3		
	Request	Match	Total
<b>SALARIES &amp; WAGES</b>			
Professional (Cao Cost Share)	\$67,850	\$2,903	\$70,753
Professional (Anderson Cost Share)	\$0		\$0
<b>Total Salaries &amp; Wages</b>	<b>\$67,850</b>	<b>\$2,903</b>	<b>\$70,753</b>
<b>FRINGE BENEFITS</b>			
Professional @ 44.77%	\$30,376	\$1,300	\$31,676
Professional @ 44.77%	\$0	\$0	\$0
<b>Total Fringe Benefits</b>	<b>\$30,376</b>	<b>\$1,300</b>	<b>\$31,676</b>
<b>Total Salaries, Wages, &amp; Fringe Benefits</b>	<b>\$98,226</b>	<b>\$4,203</b>	<b>\$102,429</b>
<b>TRAVEL</b>			
Out of state	\$800		\$800
In state	\$200		\$200
Operation of Auto	\$0		\$0
<b>Total Travel</b>	<b>\$1,000</b>	<b>\$0</b>	<b>\$1,000</b>
<b>MATERIALS &amp; SUPPLIES - General</b>	<b>\$174</b>		<b>\$174</b>
Publication costs (reprints/page costs)			\$0
<b>Total Materials &amp; Supplies</b>	<b>\$174</b>	<b>\$0</b>	<b>\$174</b>
<b>CONTRACTUAL SERVICES - General</b>	<b>\$250</b>		<b>\$250</b>
Each Subaward up to \$25K			\$0
Exempt Subawards (>\$25K)			\$0
Conference Registration Fees	\$350		\$350
<b>Total Contractual Services</b>	<b>\$600</b>	<b>\$0</b>	<b>\$600</b>
<b>TELECOMMUNICATION SERVICES</b>			\$0
<b>EQUIPMENT (each item \$5000 +)</b>			\$0
<b>Total Direct Costs</b>	<b>\$100,000</b>	<b>\$4,203</b>	<b>\$104,203</b>
<b>Modified Total Direct Costs (MTDC)</b>	<b>\$100,000</b>	<b>\$4,203</b>	<b>\$104,203</b>
<b>F&amp;A (20 % MTDC)</b>	<b>\$20,000</b>		<b>\$20,000</b>
<b>F&amp;A (26 % MTDC)</b>		<b>\$1,093</b>	<b>\$1,093</b>
<b>Unrecovered F&amp;A (20 % vs. 26 % )</b>		<b>\$6,000</b>	<b>\$6,000</b>
<b>Total Proposed Project Budget</b>	<b>\$120,000</b>	<b>\$11,296</b>	<b>\$131,296</b>

## Budget Full Project

PROJECT BUDGET Expense Line Item	Project Total		
	Request	Match	Total
<b>SALARIES &amp; WAGES</b>			
Professional (Cao Cost Share)	\$197,850	\$8,711	\$206,561
Professional (Anderson Cost Share)	\$0	\$17,622	\$17,622
<b>Total Salaries &amp; Wages</b>	<b>\$197,850</b>	<b>\$26,333</b>	<b>\$224,183</b>
<b>FRINGE BENEFITS</b>			
Professional @ 44.77%	\$88,578	\$3,900	\$92,478
Professional @ 44.77%	\$0	\$7,889	\$7,889
<b>Total Fringe Benefits</b>	<b>\$88,578</b>	<b>\$11,789</b>	<b>\$100,367</b>
<b>Total Salaries, Wages, &amp; Fringe Benefits</b>	<b>\$286,428</b>	<b>\$38,122</b>	<b>\$324,550</b>
<b>TRAVEL</b>			
Out of state	\$2,400	\$0	\$2,400
In state	\$600	\$0	\$600
Operation of Auto	\$0	\$0	\$0
<b>Total Travel</b>	<b>\$3,000</b>	<b>\$0</b>	<b>\$3,000</b>
<b>MATERIALS &amp; SUPPLIES - General</b>	<b>\$438</b>	<b>\$0</b>	<b>\$438</b>
Publication costs (reprints/page costs)	\$0	\$0	\$0
<b>Total Materials &amp; Supplies</b>	<b>\$438</b>	<b>\$0</b>	<b>\$438</b>
<b>CONTRACTUAL SERVICES - General</b>	<b>\$750</b>	<b>\$0</b>	<b>\$750</b>
Each Subaward up to \$25K	\$0	\$0	\$0
Exempt Subawards (>\$25K)	\$0	\$0	\$0
Conference Registration Fees	\$1,050	\$0	\$1,050
<b>Total Contractual Services</b>	<b>\$1,800</b>	<b>\$0</b>	<b>\$1,800</b>
<b>TELECOMMUNICATION SERVICES</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>EQUIPMENT (each item \$5000 +)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Direct Costs</b>	<b>\$291,666</b>	<b>\$38,122</b>	<b>\$329,788</b>
<b>Modified Total Direct Costs (MTDC)</b>	<b>\$291,666</b>	<b>\$38,122</b>	<b>\$329,788</b>
<b>F&amp;A (20 % MTDC)</b>	<b>\$58,334</b>		<b>\$58,334</b>
<b>F&amp;A (26 % MTDC)</b>		<b>\$9,912</b>	<b>\$9,912</b>
<b>Unrecovered F&amp;A (20 % vs. 26 % )</b>		<b>\$17,499</b>	<b>\$17,499</b>
<b>Total Proposed Project Budget</b>	<b>\$350,000</b>	<b>\$65,533</b>	<b>\$415,533</b>

**Location:**

This project will be completed by INHS staff in Springfield and Champaign with the assistance of IDNR staff in Springfield.

**Budget Justification:**

*IDNR Project Support:* This project supports the IDNR's Wildlife Action Plan. To promote coordination with IDNR personnel, primary project staff will be located at the IDNR headquarters in Springfield. The IDNR will provide project staff office space and other supplies and items necessary to support the project. Examples include telephone, computer support (e.g., printer, network, and email access), motor pool, etc.

*Salaries and Wages:* We request a total of \$197,850 to support the salaries of the equivalent of 1.5 full time research staff for the duration of the project.

*Fringe Benefits:* We request a total of \$88,578 in Fringe benefits in accordance with those budgeted for wages. Fringe benefits will be paid at a rate of 44.77% for INHS Professional staff.

*Travel:* We request a total of \$3,000 to reimburse staff for expenses to meet with Natural Areas Managers within Illinois and to present research findings at conferences. These funds will partially support attendance at the Natural Areas Conference (e.g., 2016 meeting in Davis, CA) or other appropriate Conference to obtain feedback from partners and researchers doing similar work. Lodging and per diem will be reimbursed for one staff member at standard State of Illinois rates during these conferences.

*Materials & Supplies:* We request a total of \$438 to purchase electronic data storage, printer paper, and general office supplies as required for the project.

*Contractual Services:* We request a total of \$1,800 for Contractual Services over the project period. These funds are needed for software licensing (\$750), and to reimburse staff for conference registration fees (\$1,050) necessary to present research findings at the annual Natural Areas Conference (or other appropriate conference). Presentations at professional conferences inform the scientific community, resource managers, and the public and allow for peer review and public input/comment of project work.

*Equipment:* We request no funds for equipment.

*Facilities and Administrative Costs:* We request \$58,334 to offset facilities and administrative costs.

*Matching Funds:* INHS will provide in-kind match of \$65,533 during the project period. INHS matching funds during the three year project period will consist of staff salary (\$26,333), benefits (\$11,789), F&A (\$9,912), and unrecovered F&A (\$17,499). Staff providing a portion of their salaries as match are Co-PI's, Yong Cao (3 years) and Brian Anderson (10 months = Sept 1, 2016-June 30, 2017).

**General:**

This project statement describes a need consistent with the State Wildlife Grants (SWG) program: states a purpose and sets objectives, both of which are based on the need; uses a planned approach, appropriate procedures, accepted principles of research, and is cost effective.

**Compliance:**

The IDNR will use its CERP (Comprehensive Environmental Review Process) as a tool to aid the Department in meeting NEPA compliance for the project outlined under this grant proposal. It is the Department's policy to require CERP applications for all land disturbing activities unless those activities are covered by CERP exemptions.

All planned activities will also be in compliance with the Endangered Species Act. All determinations and documentation will be in accordance with the current established U.S. Fish and Wildlife Service protocols for section 7.

**Relationship to Other Grants:**

This project builds on, and supports, much of the previous work funded through Illinois' State Wildlife Grant program. Illinois' SWG has prioritized funding habitat acquisition (6 projects), stewardship activities (43 projects), research targeting SGCN (31 projects), and conservation planning and evaluation (22 projects). The habitats acquired, and stewardship activities undertaken, with these SWG Funds have occurred primarily within the Protected Lands that will be evaluated during the proposed project. Targeted research projects have also provided new information on the distribution and conservation status of many SGCN throughout Illinois. These data will be used to identify gaps in the current Protected Lands Network and prioritize locations for protection and stewardship for these SGCN.

The evaluations proposed in this project will identify the relative importance (irreplaceability) of each site to statewide conservation goals associated with the protection of natural community types and of SGCN (i.e., Endangered and Threatened Species). These results will inform ongoing and future habitat acquisition and stewardship activities to improve the Network of Protected Lands in Illinois and better meet the goal of maintaining high quality natural community types and rare species into the future.

**Personnel:**

The personnel funds requested in this project will fund the equivalent of 1.5 full time research scientists to conduct the analysis and manage the project. Other INHS and IDNR personnel listed below will provide additional support.

The following personnel from IDNR Office of Resource Conservation (ORC), One Natural Resources Way, Springfield, IL 62702 will manage this project:

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**Additional personnel involved in this project at the same location include:*****INHS***

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**Project Schedule Year 1:**

	9/16 – 12/16	01/17 – 03/17	04/17 – 06/17	07/17 – 09/17
Job 1.	X	X	X	X
Job 2.	X	X	X	X
Job 3.				
Job 4.				
Job 5.				
Job 6.			X	X
Job 7.				
Job 8.				
Job 9.				
Job 10.			X	X

**Project Schedule Year 2:**

	10/17 – 12/17	01/18 – 03/18	04/18 – 06/18	07/18 – 09/18
Job 1.				
Job 2.				
Job 3.	X	X	X	X
Job 4.	X	X	X	X
Job 5.	X	X	X	X
Job 6.	X	X	X	X
Job 7.	X	X	X	X
Job 8.				
Job 9.				
Job 10.			X	X

**Project Schedule Year 3:**

	10/18 – 12/18	01/19 – 03/19	04/19 – 06/19	07/19 – 08/19
Job 1.				
Job 2.				
Job 3.	X	X	X	X
Job 4.	X	X	X	X
Job 5.				
Job 6.				
Job 7.				
Job 8.	X	X	X	X
Job 9.	X	X	X	X
Job 10.			X	X